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Twelve Tips for Choosing and Surviving a PhD in Medical Education - a Student Perspective.

Authors: Billy Bryan¹ and Helen Church¹

Affiliation: ¹ Academic Unit of Medical Education, the University of Sheffield, Sheffield, UK

Corresponding author details: bjbryan1@sheffield.ac.uk. The Medical School, University of Sheffield, Beech Hill Road, Sheffield S10 2RX, UK

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Abstract

The decision to undertake a PhD in medical education could mark a critical point in defining your future career. Attaining the highest level of degree in such a diverse and rewarding area as medical education may not only provide you with an opportunity to undertake important new research, but could also unlock different job opportunities. As is often the case, such rewards are not gained lightly. There can be real challenges in making the decision to undertake and then to successfully navigate a PhD. The specific subject and process of each doctorate is unique, leaving many prospective and current students uncertain as to what to expect. We offer our 12 tips from the perspective of two current PhD students to help guide those who share our interest in medical education and are considering doctoral study.

Introduction

The growing demand for higher degrees in medical education (Tekian 2014) offers more opportunities to undertake postgraduate doctoral studies. However, compared to other academic disciplines, the number of PhD students in medical education are relatively few and there is often limited guidance and peer support for students, particularly before and during the doctoral process. Guidance from the perspective of those who have already achieved their doctorate or PhD supervisors is available (Gill et al. 2009; van Schalkwyk et al. 2016) but the experiences of current doctoral students in medical education, which are lacking in the literature, may offer essential practical advice from the learner perspective.

Currently in our second (Church) and final (Bryan) year of our PhDs in medical education, we offer practical guidance highlighting two main themes; (1) making the decision to undertake a PhD and (2) how to thrive and survive during doctoral study.

1. Is a PhD in Medical Education right for me?

When considering undertaking a PhD in medical education, it is crucial to ask yourself: “Why a PhD?” Evaluating your motivations for embarking upon such a substantial project, potentially whilst putting other work or training on-hold, is imperative to ensure that you access the full value of the degree. These motivations should underpin your initial conversations with your supervisors (van Schalkwyk et al. 2016), both during your application process and on commencing your PhD. Perhaps the PhD is an opportunity to pursue a particular research idea that you have, or it has the aim of establishing professional relationships for your future career within medical education. Whatever the reason(s), being honest about them and making considered decisions regarding the timing, topic, and most importantly where you do your PhD will help you fulfil your career aspirations and personal goals.

2. What qualifications do I need?

Choosing the most appropriate time to undertake a PhD can be complex, especially as learners looking to make this transition are from different stages of their academic and/or clinical career.

Previous medical education qualifications (e.g. a Postgraduate Certificate or a Masters) are not always requirements for undertaking a PhD: Neither authors had a previous qualification in medical education, but did have degrees in associated disciplines. It is possible to enter medical education if you come from a related degree discipline (e.g. psychology, sports, or education) and you can bring a fresh perspective to the field. This means that there is no pre-determined time in your career that you have to enter doctoral study, it is down to your specific situation.

Healthcare professionals considering a PhD in medical education must strike a good balance between work and study. Studying in parallel with clinical training requires you to develop flexible working-patterns to accommodate your doctoral study whilst maintaining clinical competency. The PhD may also allow you to explore alternative career paths and could feed into your practice, especially if you have an educational component in your role.

3. What else should I think about?

Before committing to a PhD it is essential to consider the potential personal and financial impact. A PhD can have a profound effect on your life outside of study (Neumann and Tan 2011) and therefore it is crucial to not overlook other work or family commitments when choosing your study location. You may also consider what your goals are for your future career and how the PhD fits into your strategy for achieving them, this can keep you focused on the big picture when deciding which PhD path to take.

PhDs in medical education may be funded through university or departmental scholarships, although there are less funded studentships than pure science subjects and you may have to consider alternative sources. Scholarships are available both locally and internationally, but there are also a wider range of sources of funding including prizes and awards that may sponsor your doctoral study. The website of your chosen university will have the most

relevant information regarding the fees involved and potential sources of funding for PhDs. Having the required funding in place, both to pay the academic fees but also to provide living expenses, is generally a requirement for international students before being able to register for PhD studies.

4. How do I choose a topic for my PhD?

The topic of your PhD must be novel, meaningful, and interesting. As a PhD is awarded for, “an original contribution to knowledge” (Phillips and Pugh 2000, p. 63), your research question must address a clear gap in the current literature. Structured PhD programmes usually have a predefined area for the topic and research question, offering less initial creative input. Alternatively, unstructured programmes may suggest a general theme, e.g. assessment or peer learning, and allows you the freedom to steer the project’s specific direction. In this case a quick literature search, such as using Google Scholar, is useful to ensure your proposed research questions haven’t already been answered.

The output of every PhD is unique: From advancing a conceptual understanding of a topic, to proof of concept of theoretical models which will guide future research on a larger scale. Ask yourself: “What does this add?” to ensure that you are making a novel contribution to the knowledge in the field. Ask your prospective supervisors too, they are key in helping you refine your research question with their expertise in the area – which is why you chose them!

An interesting topic is paramount to maintaining your motivation for the duration of study and since a PhD may afford you the status of ‘world expert’ in this area, you may pursue the topic into your post-doctoral career; so choose carefully. Leading journals from medical education, social sciences, education, and many other fields hold the current discourses in your subject and may provide you with the cutting-edge PhD topic idea you’ve been looking for. Do not be afraid to research different departments’ research focuses. They could give you some inspiration if you’re stuck on ideas. All of these elements should be clear in your mind prior to your formal application.

5. How do I choose my supervisors and where do I choose to study?

Supervisors are a vital part of the PhD process, and can often help determine the success of the project. Firstly, research the supervisors’ academic credentials, e.g. role at the university, do they regularly publish interesting articles? Having a supervisor who is an expert in their field is invaluable for your project and its direction, they may also have useful experiences of presenting at conferences or have professional connections you can benefit from. Secondly, enquire about their supervisory experience: How many PhD students have they supervised to completion? Will they be able to dedicate enough time to me so I can successfully complete my project? Finally, and perhaps most importantly, you must ask yourself: “Could I work with this person?” Building a positive ‘educational alliance’ (Telio et al. 2015) over time between you and your supervisor can really enhance the PhD process, with the caveat that each supervisor/learner relationship is unique (van Schalkwyk et al. 2016).

The provisions and facilities of the institution are deciding factors on whether you are able to conduct your project: if you are studying students’ use of metacognition on simulated ward rounds; are there adequate simulation facilities available? If you are exploring the impact of a teaching intervention in neonatal care; are there hospitals nearby with appropriate

departments in which you can collect your data? You should try to research this beforehand and definitely query it before submitting your application.

6. Where do I find the right sources of information?

As with any academic area there are key texts which are considered ‘must-reads’ to gain a solid foundation of knowledge on which to build your research questions. The library’s collection of textbooks can be overwhelming and therefore guidance from supervisors and other PhD students is useful to collate the best and most relevant sources. They may even offer to lend you books from their collection.

Keeping abreast with current research during your PhD can be challenging, particularly when the data collection and analysis elements of your own study take priority. Setting Google Scholar alerts for the current most influential researchers notify you of their latest publications, keeping you up-to-date on those leading the field. This can also be done for new issues of journals. Incidentally as we write this paragraph we are reminded of the information sources forwarded to us by our supervisors, hearing the familiar ‘ping’ of an email notification containing links, documents, and summaries of useful sources.

Peer learning groups can be an excellent way to learn about the wider educational literature which underpin many methodologies used in medical education (Lara Varpio and Mylopoulos 2015). Supervisors and peers can help you understand and explore these links, giving you a deeper understanding of your topic area in different disciplines and fields.

7. What can I expect from a PhD in Medical Education?

The PhD by nature is an independent course of study, and a medical education PhD is no exception. The two authors recognise that, in general, they are more remotely supervised than learners in laboratory or clinical environments but this is typical in similar fields, such as the social sciences. You have the ultimate responsibility for your day-to-day work and maintaining a good work/life balance.

The end of a PhD course can feel deceptively far-away until, usually by the middle of year two, the frantic worry about meeting the final deadline sets in. In an attempt to manage this, iteratively design your goals to monitor your progress at regular intervals and stay on track. Agreeing targets with your supervisors offers some accountability in meeting deadlines. Tools such as the SMART (Specific, Measurable, Achievable, Realistic, Time-limited) framework are useful to plan your objectives and ensure they are realistic for the time that you have left on your PhD journey.

It is prudent to plan out your time and get into a routine based around achieving these goals and milestones, Gantt charts are a very useful tool for visualising this. For students balancing other commitments such as work or childcare alongside study or those enrolled on distance/part-time programmes, there is an additional dimension of complexity to time-management. This becomes more significant for data collection periods or supervisory meetings where other people’s scheduling often dictates how and when you can get things done.

8. How is a PhD in Medical Education different from other PhD’s?

The uniqueness of your medical education project compared to other medical research based doctorates can be a strength. A laboratory-based PhD is often different in that they can be very narrow in their scope so that those outside the research group fail to fully appreciate its impact, but may still achieve a publication in the journal *Nature*. Medical education research projects tend to involve developing more practical applications to learning and healthcare, and this accessibility can be an advantage when communicating your research to lay audiences.

Although there are advantages to being in a niche area, this can sometimes lead to feeling isolated from your University's whole PhD cohort. Your colleagues in the medical education department can help to address this: In an environment where common ground and shared interests are necessary for the generation of ideas and practical advice, they are on-hand to support you. Your supervisor is the first point-of-call for becoming more acquainted with researchers within your department. Branching out to connect with PhD students across the faculties can be achieved through doctoral student groups around the university and supportive international online communities, such as: 'PhD forum', 'PhD chat', and others.

9. How do I get the most out of my PhD?

The place in which you will work will likely be home to a community of individuals with inter-disciplinary skill-sets, areas of interest, and expertise. These colleagues can not only offer you support for your own project, but can also provide opportunities for you to be involved with theirs. Each department is unique in its spectrum of experience and special interest: For example, there might be practicing clinicians, psychologists, educational researchers, and learning technologists in your place of work. Getting to know these individuals may lead you to discover interesting crossovers for your work and develop truly original collaboration and ideas from where you may have least expected them.

A PhD allows the opportunity to complete high-quality research and to immerse yourself in the broader context of health professions education. As your department may deliver undergraduate healthcare training there could be opportunities to teach classes and supervise on projects. Contributing to assessment through standard-setting for undergraduate examinations and facilitating practical exams are valuable experiences and are well-received by the department when looking for volunteers.

10. How can I work with other disciplines?

Within clinical medicine, multidisciplinary working between different healthcare professionals is promoted to achieve patient-centred care. This collaborative approach is paralleled by researchers in the field of medical educational research (Leja and Wardley 2002), who are encouraged to share ideas from different healthcare practices. Disciplines outside medicine and health education are also increasingly popular sources from which to generate new and interesting ideas (Sandars 2015).

Both authors of this article have incorporated perspectives from sports psychology into their PhD research. These ideas have been generated through prior experience in the field, the literature, and encouragement from our supervisors. To encourage such innovation, most universities run networking 'speed-dating' events where you can strike up fruitful conversations with potential collaborators and get outside perspectives on your research problem.

This collaborative approach to addressing the novel problems during your PhD can create opportunities for your research outcomes to be applied to, and be shared with, both communities from which your research takes its influence.

11. What are the challenges of a Medical Education PhD?

The more varied approaches to research in medical education can sometimes cause challenges in faculties dominated by quantitative, biological-sciences research. Medical education research departments are a much 'younger' addition to medical faculties and in some cases are still establishing their position within the institution. Therefore, the established administrative regulations do not always align with the qualitative or mixed-methods approaches used in many medical education doctoral projects. For example, presentations and summative written assignments may adopt the 'scientific method' template which is restrictive if you are using qualitative methodology.

Such challenges can also be viewed as opportunities to problem-solve. For the authors of this article, instead of using laboratory books to record our weekly activities, we utilised our online university portfolio to design an e-diary which can be accessed from any location, immediately shared with supervisors and linked to their research development plans. Navigating through such issues will not only make your own PhD journey run more smoothly, but could also benefit future students' experiences too.

12. What else can I gain from my PhD experience?

Although you will gain technical and research competencies, a PhD may not equip you with the transferable skills required for roles outside of research. Graduates' skills often fall short of employers' expectations (Diamond 2014), and therefore extra-curricular activities can be used to boost your post-doctoral employability.

Competitions, conferences, and volunteering can facilitate the development of skills such as communication and networking. Developing leadership and management skills can be gained through assuming positions of responsibility in your department or institution; such as organising a journal club or chairing a student committee. These should not impede your PhD work, but should complement it. In fact, participation in any extra-curricular activity will afford you the indirect benefit of allowing your mind to assimilate all of your rapidly accumulating knowledge or may forge academic networks.

Although medical education allows more flexibility in working patterns, students must still be mindful of striking a good work/life balance. The mental health of those in academia, in particular among doctoral students, has been shown to be worryingly poor (Lipson et al. 2016). Maintaining good mental and physical well-being by avoiding burnout and seeking support is essential, and will undoubtedly result in a much more enjoyable PhD process.

Conclusion

As the number of medical education doctoral opportunities to meet the demand of students and researchers, more practical guidance available for students is needed specifically for this field. These twelve tips, and others writing on the medical education doctoral journey (Gill et

al. 2009; van Schalkwyk et al. 2016), provide different perspectives and support to ensure success whilst pursuing a PhD in medical education.

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Notes on contributors

Billy Bryan is a final year PhD student studying how new feedback techniques in teaching can improve medical students' self-regulated learning.

Helen Church is a second year PhD student studying how the application of sports psychology techniques within a model of metacognition may enhance junior doctors' management of acutely unwell patients.

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Declarations of interest

The authors have no declarations of interest to report.